

Water Filtering System for Small Communities with Contaminated Water

ABSTRACT:

A Hungarian R&D company developed a simple and flexible water treating system to effectively filter and adsorb different harmful contaminants from different water quantities from household level to community level. The company is seeking to find partners interested in selling the system and finding distribution partners.

OVERVIEW:

The core of the system is the special regenerable adsorbent material manufactured by the company. It also implements other commercially available water filtering modules and a data processing and information module.

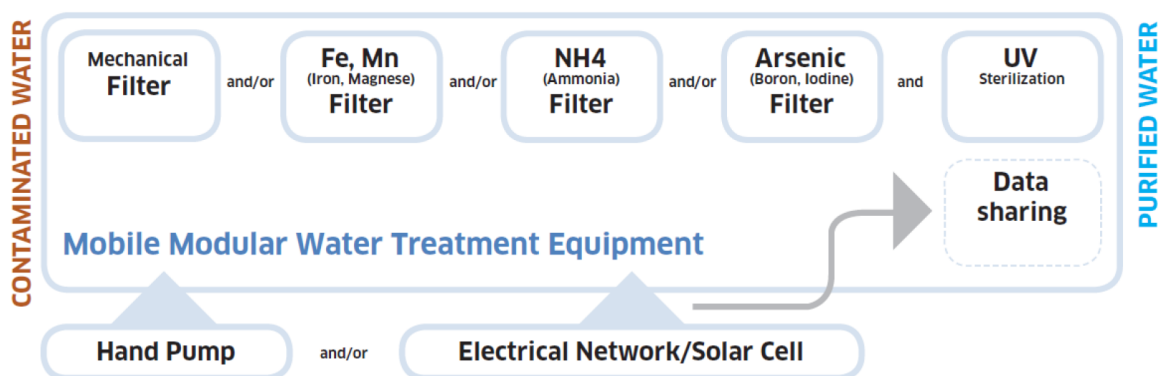
There is two main elements of the water treating system:

I. Water Units

The modular design makes possible to match the technology effectively and simply to local water source with different water quality from household level to community level. These Units provide contaminant free drinking water combining 5 modules:

1. Module: Mechanical filtering (coarse sand filter)
2. Module: Fe (iron), Mn (manganese) mitigation unit
3. Module: NH₄ (ammonia) mitigation unit
4. Module: Innovative, regenerable As (arsenic), B (boron) I (iodine) and F (fluorine) adsorbent unit
5. Module: UV-light disinfection

(Modules 2., 3., or 4. Are variable depending on the water quality.)



These adsorbent materials are installed into easy-to-treat equipment which can be fitted either to existing water supply networks or tube wells. The system is ideal for “on-site” application and easy to operate. The water treating modules are installed into a uniform metal box which meets the Euro-Pallet standard. The box is equipped with a communication device which can transmit the measurement data paired with its GPS coordinates to the local Service Center to follow the state of the water treatment system. In underdeveloped regions the users have no information about the exhaustion of the installed water treatment technology. The pollution and infection caused by the depleted technologies are more dangerous than the polluted water. The communication device helps to avoid this risk.

II. Service and Monitoring Center

The individual units installed in homes, institutions (schools, hospitals etc.) or villages would be controlled by Service Centres located in proper distance to supply the service of the units. Regeneration and change of the filter media and absorbent materials will be performed by these centers. The data collected by the communication devices is stored in a server which can be installed in the Service and Monitoring Center on a standalone server or on cloud service. Centers control the state of the water units located in the villages and institutions in the given geographical area.

CUSTOMER BENEFITS:

- Sustainable
- Simple maintenance, easy to operate
- Low operation cost
- Long life expectancy (7 years)
- Environmentally friendly, Energy efficient
- Thanks to the simple flow through design there is no water storage is needed
- Variable in capacity (from household waterworks to small waterworks) and in the types of contaminants that can be eliminated

ADDITIONAL TECHNICAL INFORMATION:

The technology is able to manage up to 6000 L/day.

Transport size max: 800 x 1200 x 2000

Weight: max 500 kg



TYPE OF COLLABORATION:

The company is seeking companies interested in purchasing or distributing the mentioned water filtering system or companies interested in buying the know-how.

If you are interested, please respond to:

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